American Physical Therapy Association 2009

Can the Activity-Specific Balance Confidence Scale Objectify Safety Awareness in Sub-Acute Adults?

Veronica Smith[1], PT, MA, Victoria Panzer[1,2], MA, EdM., PhD, Evelyn McKay[3], PT, and Dorothy Wakefield[1,2], MS

[1] Brookside Research & Development Company, North Salem, NY; [2] Dept. of Neurology, University of Connecticut Health Center, Farmington, CT
[3] Dept. of Rehabilitation, Southington Care Center, Southington, CT

Theory: Physical therapists must address both physical function as well as their patients' perceived sense of these capabilities to implement an effective plan of care (POC). The Activity-Specific Balance Confidence scale (ABC) complements the PT evaluation, addressing the dynamic interaction between physical and psychological states. Evaluation of an individual's relevant safety awareness may help identify specific elements to focus the POC and provide evidence the therapist can use to evaluate readiness for discharge.

Phenomenon: We previously demonstrated that the overall ABC score can be used to classify individuals as fearful, congruent or overconfident, considering their epidemiologically determined fall risk. Among community dwelling elders (CDE) with a history of falls, many more individuals were overconfident (40-45%) than were fearful (5-10%). Subacute inpatients were found to differ significantly ($p<.0001$) from these CDE. The overall differences were independent of age, though Seniors differed from Baby Boomers (>65 years old) on some individual items. The nature of subacute admission suggests that these patient's perceptions may be mis-aligned with current function. The importance of characterizing an individual's sense of safety awareness cannot be overstated as it may impact the level of care on admission, candidacy for rehabilitation, rehabilitation outcomes, and the interdisciplinary POC for safe discharge to the community.

Purpose: To provide an evidence-based determination for inclusion of fall prevention interventions in the subacute POC. Scarce attention has been given to the psychological underpinnings of successful therapy as well as the relationship between perception and function.

Evidence: On admission, 195 consecutive subacute patients were administered the ABC scale by trained therapists. Individual responses were compared to normative values considering admitting diagnosis. Each item's score was thus evaluated as 'Appropriate' or 'Inappropriate' by an independent PT. Items relevant to functional areas addressed in the PT POC and readiness for discharge (Gait, Stepping, Transfer and Safety Awareness) were evaluated with non-parametric Chi Square analyses considering the setting (Home or Community) and functional category of each item. There was a significant difference ($p<.04$) in the proportion of inappropriate responses with respect to setting. Patients were 1.2 times as likely (95% confidence interval 1.0-1.4) to report inappropriate confidence for Home compared to Community items. This reflects the four items with the highest proportion of inappropriate responses, which were: Gait (walking) in the home and driveway; Stepping (stairs) in the home and Transfer (in/out of car). Inappropriate response rates for these items ranging from 50-73% were identified in arthoplasty patients who represented 64% of this convenience sample.

Testable Hypothesis: The ABC reveals specific safety awareness issues that may be used to shape the POC. Analysis of ABC items can identify functional components to be addressed during treatment. High rates of inappropriate responses to home-based functional activities suggest relevance to discharge planning. Future research should investigate the use of the ABC scale to shape the interdisciplinary POC. The value of individual items as outcome measures of treatment efficacy should be examined considering the influence of patient characteristics such as age and primary diagnosis. The comparison of initial to current item responses may provide evidence in support of discharge readiness.

Importance: Achievement of safe, functional mobility is the ultimate goal of a patient's rehabilitation POC. The ABC can be a useful tool to investigate a patient's self-perception and acceptance of acute changes in their functional mobility. Addressing each inappropriate response with functionally-based goals promotes alignment of home and community safety awareness. This tool can facilitate development of a customized evidenced-based POC. The results encourage patient and family education and promote planning for safe discharge to the community.

Funding Source: None